

# **Method and Apparatus for Semiconductor Wafer Planarization**

## **ABSTRACT OF THE DISCLOSURE**

Broadly speaking, the present invention provides a method and an apparatus for  
5 planarizing a semiconductor wafer ("wafer"). More specifically, the present invention  
provides for depositing a planarizing layer over the wafer, wherein the planarizing layer  
serves to fill recessed areas present on a surface of the wafer. A planar member is  
positioned over and proximate to a top surface of the wafer. Positioning of the planar  
member serves to entrap electroless plating solution between the planar member and the  
10 wafer surface. Radiant energy is applied to the wafer surface to cause a temperature  
increase at an interface between the wafer surface and the electroless plating solution. The  
temperature increase in turn causes plating reactions to occur at the wafer surface. Material  
deposited through the plating reactions forms a planarizing layer that conforms to a  
planarity of the planar member.